

Supplemental Material

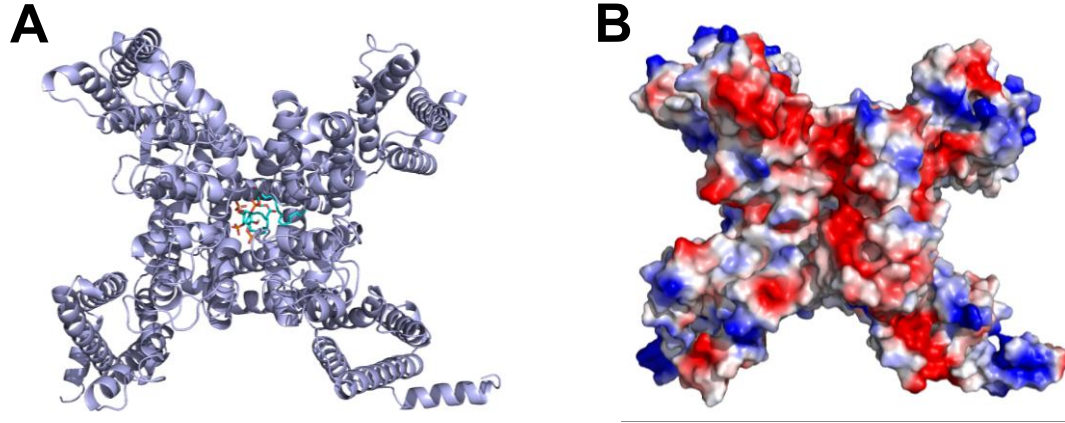


Figure S1. Modeled structure and electrostatic potential surface of murine Nav 1.5 channel with phosphatidylinositol-3, 4, 5-triphosphate (PIP₃). **A.** Modeled structure of murine Nav 1.5 channel with PIP₃ (top view). **B.** Modeled electrostatic potential surface of murine Nav 1.5 channel with PIP₃.

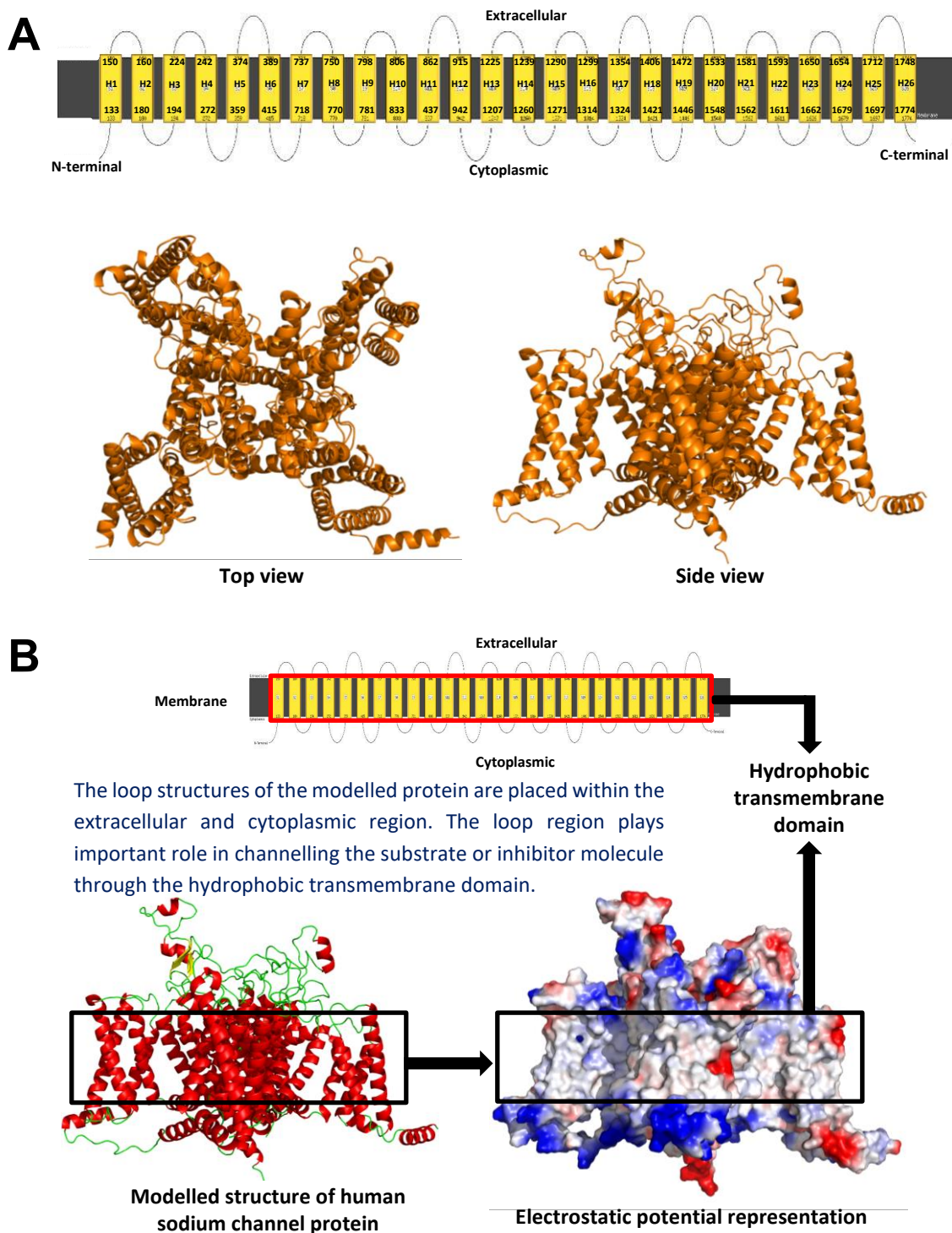


Figure S2. Structure and domain architecture of modeled human Nav 1.5 channel. A. Modeled structure of human Nav 1.5 channel. **B.** Domain architecture of modeled human Nav 1.5 channel.

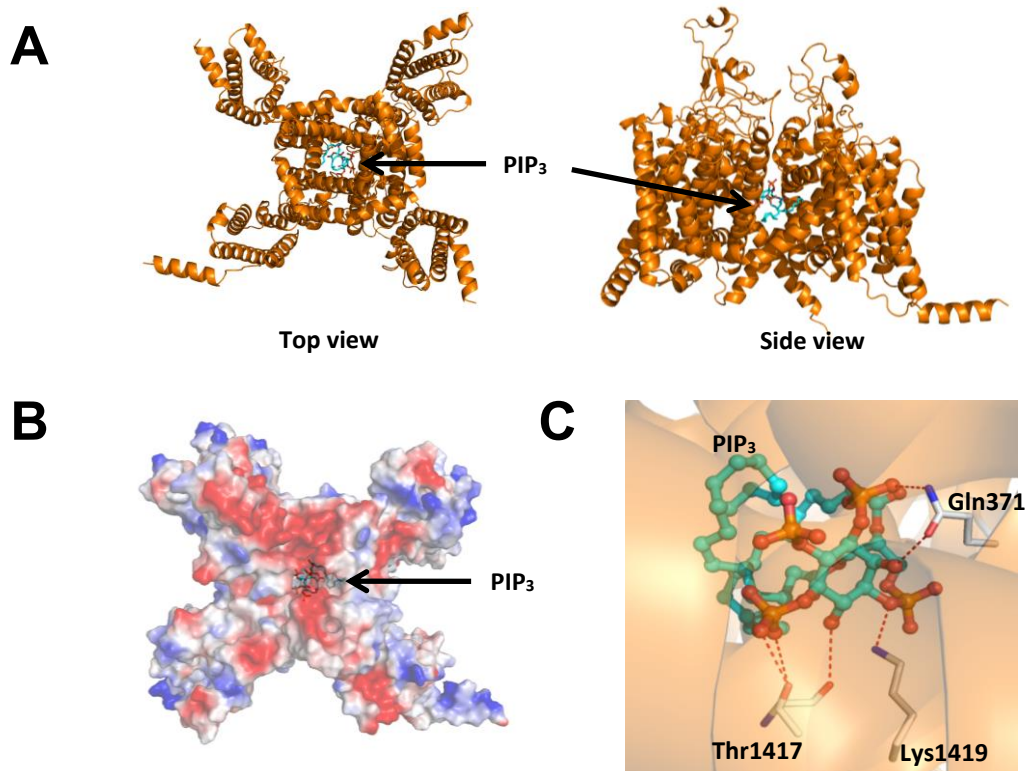


Figure S3. Phosphatidylinositol-3, 4, 5-triphosphate (PIP₃) interaction with human Nav 1.5. **A.** Top and side view of human Nav 1.5 channel with PIP₃. **B.** Electrostatic potential surface of the human Nav 1.5 channel (top view) with PIP₃. **C.** Region of human Nav 1.5 channel interacting with PIP₃. Gln, glutamine; Lys, lysine; Thr, threonine.

Supplemental Video Legends:

Video S1. Wild-type (WT) heart at baseline. Pseudo-color video of epicardial imaging with voltage sensitive dye RH237. The 2-s recording of the post-stimulation interval at 50 frames/s. Acquisition frame rate 1,000 frames/s. Best viewed with Windows Media Player.

Video S2. Wild-type (WT) heart at 1-min reperfusion. Pseudo-color video of epicardial imaging with voltage sensitive dye RH237. The 2-s recording of the post-stimulation interval at 50 frames/s. Acquisition frame rate 1,000 frames/s. Best viewed with Windows Media Player.

Video S3. p110 α -DN (constituent PI3K α -deficient) heart at baseline. Pseudo-color video of epicardial imaging with voltage sensitive dye RH237. The 2-s recording of the post-stimulation interval at 50 frames/s. Acquisition frame rate 1,000 frames/s. Best viewed with Windows Media Player.

Video S4. p110 α -DN (constituent PI3K α -deficient) heart at 1-min reperfusion. Pseudo-color video of epicardial imaging with voltage sensitive dye RH237. The 2-s recording of the post-stimulation interval at 50 frames/s. Acquisition frame rate 1,000 frames/s. Best viewed with Windows Media Player.